Greater than the Sum of the Parts? Evidence on Mechanisms Operating in Women's Groups

Lucía Díaz-Martin, Akshara Gopalan, Eleonora Guarnieri, and Seema Jayachandran

Women's groups are a popular approach to promoting women's and girls' empowerment. Yet, whether and how creating and supporting women's groups and delivering interventions through them offers unique benefits compared to individual-based interventions remains an open question. We review the experimental and quasi-experimental literature on women's livelihoods and financial groups, health groups, and adolescent groups, and analyze the causal mechanisms through which these models improved outcomes for women and girls in low and middle-income countries. We distinguish between mechanisms that leveraged groups as a platform for intervention delivery and mechanisms that leveraged interactions among group members. We conclude that the primary benefit of group models is to offer a platform to reach many women at once with resources, information, and training. Nonetheless, some evidence suggests that group models can achieve positive impacts by fostering or harnessing interactions among group members, which would be harder or impossible to achieve through individual-based interventions. We offer some suggestions regarding the implications of these findings for programming and future research.

JEL Codes: J16, I38, O10
Keywords: women's groups, collectives, self-help groups, women's empowerment, women's agency.

Women's group models are gaining increasing attention as policymakers, donors, and advocates seek effective strategies to promote women and girls' empowerment at scale. In communities around the world, women organize and support one another through women's groups. Some examples include savings groups, self-help groups (SHGs), mothers' groups, community mobilization groups, and adolescent groups for

The World Bank Research Observer

https://doi.org/10.1093/wbro/lkac001 0:1–57

girls. Groups serve as spaces where women socialize, build connections, and work toward economic or political goals. In addition, they offer an entry point for development organizations to reach large numbers of women at once to deliver interventions. Do group-based models offer unique benefits when compared to equivalent interventions implemented outside groups? In this paper, we shed light on this question by reviewing the evidence on women's groups and analyzing key mechanisms that operate within group-based interventions.

Previous literature has highlighted the potential of certain group models to enhance women's empowerment and other development outcomes. A recent evidence review focused on savings groups identified positive impacts on a range of individual and household-level outcomes, such as investment in income-generating activities, food consumption, resilience, solidarity with group members, and self-confidence (Gash 2017). However, it found moderate effects along other dimensions, such as women's decision-making power, social capital, and poverty. Likewise, a systematic review found that SHGs, a collective approach based on small voluntary groups that gather to reach financial goals, were successful in achieving impacts in women's social, economic, and political empowerment, but not psychological empowerment (Brody et al. 2015). Qualitative evidence synthesized in Brody et al. (2015) suggested that financial independence, solidarity, social networks, and respect from family and community members, may have been important mediators for achieving women's empowerment.

Our review makes two main contributions beyond existing syntheses. First, we review women's groups broadly, rather than a specific type, and thus are able to draw out commonalities in the impacts of different types of groups in low and middle-income countries. Second, and arguably, more importantly, we focus much of our discussion on the causal mechanisms operating within groups. Our aim is to better understand how groups generate positive impacts for women by identifying group-specific mechanisms that are harder or impossible to harness through individual-based interventions. We define mechanisms as the underlying pathways for the measured impacts, as articulated in the evaluation. In some cases, researchers empirically tested mechanisms; in other cases, they provided only suggestive or anecdotal evidence. Drawing from these various pathways, we analyze causal chains to better understand the centrality of the group structure in generating positive outcomes for women.

We focus on studies that have a strong research design to identify the impacts of group models on women's outcomes. Specifically, we review evidence from randomized evaluations and natural experiments. In randomized evaluations, researchers estimate an intervention's impacts using random variation in which people participated in, or were eligible to participate in, an intervention. With natural experiments, researchers use naturally occurring variation in who participates in an intervention

(from, e.g., policy changes, gradual rollout of programs, cutoff rules for eligibility) that lends itself to isolating the causal effects of the intervention.

Based on Biscaye et al.'s (2014) framework, we define group-based models as sharing three common features: (a) voluntary membership; (b) members' contribution of time, labor, money, or other assets; and (c) regular face-to-face interaction among members. We further classify groups into livelihoods and financial groups, health groups, and adolescent groups. This review does not include less-studied group types like natural resource management groups or political groups and only focuses on studies that investigate the impact of groups on indicators of women's and girls' empowerment.

In our conceptual framework, we put forward two distinct potential benefits of groups relative to non-group models. The first hypothesized benefit of groups is that they function as a *platform for intervention delivery.* Groups may allow access to financial resources, information, or training to many people at one time and place. As a result, groups may facilitate the efficient implementation of certain types of interventions that would otherwise not be feasible if delivered individually, for instance, due to high costs. The second hypothesized benefit unique to group models is the *interaction among group members*. For example, groups facilitate peer interactions that may lead to positive effects through mechanisms like mutual accountability, moral support, or social networks. This distinction, by emphasizing two conceptually different benefits of groups, helps address the question regarding whether group-based approaches offer benefits for women that go beyond content and resource delivery, and if so, which mechanisms might be most critical.

We assess to what extent the available quantitative evidence is consistent with each of these two potential benefits. We do so by distinguishing between group-specific mechanisms that leverage groups as a platform for intervention delivery (for example, access to information and access to financial resources) and mechanisms that leverage interactions among group members (for example, moral support, mutual accountability, and social networks).

We present three sets of overarching takeaways. First, the primary benefit of group-based models appears to be the ability to reach large groups of women at once with resources, information, and training; that is, groups offered a *platform for intervention delivery*. Despite considerable heterogeneity in the programs delivered through groups, many led to modest improvements in women's wellbeing. These improvements were mostly confined to downstream outcomes related to the core function of the group. For example, livelihood and financial groups (e.g., microcredit groups, savings groups, and self-help groups) increased women's participation in economic activities by giving them access to financial resources including credit or assets. Increased access to financial resources, in our framework, is an example of a mechanism that leverages groups as a platform for intervention delivery. Similarly, health groups for women of reproductive age constituted a platform to disseminate

health-related information to many women at once. In turn, this mechanism increased the adoption of better health practices and behaviors within the home.

Second, women's groups usually did not generate impacts outside their core function. Livelihoods and financial groups, for instance, were effective in increasing women's access to financial services and resources, but this mechanism did not always translate to increases in women's household decision-making power. Intentional program design, through which content related to gender-specific issues was delivered, was important for effecting changes in outcomes like soft skills, violence against women, decision-making, aspirations, self-efficacy, or support for gender-equitable norms. Livelihoods groups sometimes reduced intimate partner violence (IPV), but only when they included training modules or gender dialogue sessions aimed explicitly at reducing IPV.

Third, in some cases, group-based models also generated positive impacts through interactions among group members, harnessing pathways beyond those stemming from content- and resource-delivery. There is evidence of groups helping create or strengthen women's social networks, i.e., social ties and interactions that can persist when groups dissolve. New and stronger social networks were sometimes a mechanism that led to increased political participation, risk-sharing, and adolescents spending less time in risky settings, among other findings. A small number of studies found that social networks within livelihoods and financial groups helped enforce mutual accountability, which led to positive economic outcomes. There is also anecdotal evidence that group members provided moral support to one another. However, the studies we analyzed did not consistently measure moral support and did not directly link it to positive downstream outcomes.

Taken together, these findings have important implications for future research and policy. We found that the main advantage of groups is that they function as a platform to deliver programming to many women at once: while this suggests that groups can deliver benefits at a lower cost per person, more research is needed to understand the overall costs of group models, including fixed costs to create groups, coordination costs for participants to travel to scheduled meetings, and possible indirect costs like the exclusion of marginalized groups. To date, researchers have tended to measure the impact of groups by comparing them to a control group where no intervention took place but not to another treatment group that offered an individual-based intervention. This design (as well as the lack of systematic information on costs) does not allow us to assess to what extent delivering an intervention through groups is more cost-effective than delivering an intervention individually. Therefore, our review calls for additional research investigating this aspect further.

Our second finding, which emphasizes the importance of complementary programming to generate impacts outside the core function of groups, also calls for future research on cost-effectiveness. While providing complementary programs within existing groups may still be cost-effective relative to other service delivery

models, adding in extra programming may alter the cost-effectiveness of implementing women's groups at scale.

Third, our review suggests the need for a deeper understanding of how to leverage interactions among group members to achieve positive outcomes. Consistently measuring social relationships with more standardized metrics will help elucidate the impacts of women's groups. From a policy perspective, programs should experiment with strategies for building and leveraging social relationships and networks within women's groups, such as exploring digital interactions or testing different group compositions and meeting frequencies.

The remainder of the article is organized as follows. In the next section, we define and classify group-based models. We then present our conceptual framework on two potential benefits of groups and distinguish between group-specific mechanisms that leverage groups as a platform for intervention delivery and mechanisms that leverage interaction among group members. We then discuss the evidence on mechanisms operating within livelihoods and financial groups, health groups, and adolescent groups. In a final section, we summarize key overarching lessons and highlight avenues for future research and programming.

Definitions and Conceptual Framework

Definition of Women's Groups

The definition of group-based models we use closely follows that in Biscaye et al. (2014). To be included in our analysis, groups must have the following three common features: (a) voluntary membership; (b) member contribution of time, labor, money, or other assets; and (c) regular face-to-face interaction among members. We classify groups into the following three categories based on their activities carried out and stated goals: (a) livelihoods and financial groups; (b) health groups; (c) adolescent groups.

Livelihoods and financial groups. These models intend to address women's economic constraints by providing access to financial resources. In some cases, they include complementary interventions such as skills training, dialogue groups, and participatory learning targeted to women. Examples of models for women's livelihoods and economic groups include microcredit groups, savings groups, and self-help groups (SHGs).

Microcredit groups are group-based microcredit interventions led by microfinance institutions (MFIs) where women generally share collateral in order to have access to credit, such as in joint-liability programs, and gather regularly for repayment.

Savings groups can be of two types. Rotating Credit and Savings Associations (ROSCAs) are informal, self-managed savings groups, where members save a fixed

amount every week, which is then collected in a communal "pot." Each week, one group member takes home the entire pot. The saving cycle continues until all members have received the pot once (Beaman, Karlan, and Thuysbaert 2014). Village Savings and Loan Associations (VSLAs) models are similar to ROSCAs, but differ in that they require external facilitators, usually non-governmental organizations (NGOs), in order to spread. The external facilitator trains local women on how to form and manage groups that, once formed, become self-managed. Compared to ROSCAs, VSLAs are characterized by more flexible features. Groups are composed of self-selected women, who contribute a specific amount of savings during regular meetings to a communal pool, constituting a loan fund. Members can apply for loans, to be paid back with interest and at a rate decided by the group, purchase group-based investments, or generate insurance funds for emergencies (Allen and Panetta 2010).

SHGs are a common type of group in India, often supported by the government or NGOs. For example, the state of Bihar supports SHGs for poor, rural women through its Jeevika program. Their main purpose is similar to that of savings groups, i.e., to offer women a way to save and access credit. SHGs are often connected to external financial institutions to secure funds. However, the goals of SHGs are not necessarily confined to credit and savings. Other activities include the promotion of opportunities for income-generating activities and insurance (Biscaye et al. 2014).

Health groups. The goal of women's health groups is to convey health-related information. The majority of health groups that we analyze in this paper are related to maternal and neonatal health, targeted towards women of reproductive age, and facilitated by local women or trained health workers. Through participatory learning and action (PLA), groups can promote healthy behaviors around birth and encourage access to healthcare for delivery and antenatal visits. Dissemination of health-related information and PLA can also occur through other types of groups such as livelihoods groups, microfinance groups, and SHGs. In addition, health groups can serve as a base for collective action to improve health-care quality, with communities monitoring the health-care system and holding health workers accountable for their performance.

Adolescent groups. Most adolescent group programs aim to provide young girls access to a safe space where they can meet and interact with other girls in their age group. This is expected to help girls broaden their social networks, receive moral support, access mentorship, and protect their time (for example, girls may spend more time learning with their peers than on domestic chores). Apart from enabling access to peer networks, adolescent groups can be used to deliver hard and soft skills training programs to young girls. In this review, we include adolescent group programs only if they take place outside of schools and therefore participation is voluntary, or if in school, group interactions are facilitated by a trained adolescent peer.

Conceptual Framework on Group-Specific Mechanisms

This article puts forward two distinct potential benefits of groups relative to non-group models. We assess the extent to which each benefit is present, based on the available quantitative evidence. The first hypothesized benefit of groups is that they function as a *platform for intervention delivery.* Groups allow access to financial resources, information, or training to many people at one time and place. As a result, groups may allow for the efficient implementation of certain types of interventions that would otherwise not be feasible if delivered individually (for instance, due to high costs). The second hypothesized benefit unique to group models is the *interaction among group members*. For example, groups facilitate peer interactions that may lead to positive effects by activating mechanisms like mutual accountability, moral support, soft skills, or "power within," defined here as support for gender-equitable societal norms, less acceptability of IPV, aspirations, or self-efficacy (Kabeer 1994; Rowlands 1997).

Distinguishing between mechanisms that *leverage groups as a platform for intervention delivery* and that *leverage interactions among group members* provides insights on the key advantage of the group model: When delivering an intervention through a group, is the interaction and community-building among the members an important reason for positive impacts? Or are the impacts mostly because of the intervention itself (e.g., information, resources), with the group structure incidental to impacts? That is, this framework helps address the question of whether group-based approaches offer benefits for women that go beyond content and resource delivery, and if so, which mechanisms might be most critical.

Our definition of a mechanism is more inclusive than some social science literature. We classify as mechanisms intermediate outcomes that serve as signals that a specific pathway is working. In some cases, researchers show that these intermediate outcomes led to improvements in other downstream outcomes. In other cases, these intermediate outcomes are valuable per se and researchers treat them as outcomes in their own right. We still call them "mechanisms" because they are hypothesized channels for "bigger" downstream outcomes, even if researchers do not have power to assess those or did not measure them. For example, social networks are often treated as a stand-alone outcome of groups but are also a hypothesized channel for other downstream outcomes (e.g., political participation (Prillaman 2017)). As such, we provide relevant details on the research design and related outcomes when describing the evaluations.

Table 1 and Table 2 list and define the mechanisms we refer to throughout the paper. The tables classify them in two groups: mechanisms that leverage groups as a platform for intervention delivery (access to financial resources, economic inclusion, and risk sharing; access to information; "power within;" soft skills; hard skills) and mechanisms that leverage interaction among group members (social networks;

Table 1. Mechanisms That Leverage Groups as a Platform for Intervention Delivery

Mechanisms	Definition and examples
Access to financial resources, economic inclusion, and risk-sharing	Access to resources including credit, assets, grants, and other financial resources
Access to information	Access to health information
"Power within" (Kabeer 1994; Rowlands 1997)	Support for gender-equitable societal norms; less acceptability of intimate partner violence; aspirations; self-efficacy
Soft skills	Ability to negotiate, communicate, deliberate; life skills
Hard skills	Technical skills including financial management, business management, and agricultural skills

Table 2. Mechanisms That Leverage Interactions among Group Members

Mechanisms	Definition and examples
Social networks	Social ties and interactions, both inside and outside groups, which possibly persist when groups dissolve; perceived moral and material support from group members, other members of the community, friends or family; active participation in the community and membership in groups or organizations, when part of an index measuring social capital or social networks
Mutual accountability	Accountability to peers, social pressure, peer monitoring, and risk pooling as ways to encourage desirable behaviors, e.g., to repay loans in microfinance groups or accumulate savings
Soft skills	Ability to negotiate, communicate, deliberate; life skills
Collective action and mobilization	Working collectively to achieve common goals (either group- or community-specific)
"Power within" (Kabeer 1994; Rowlands 1997)	Support for more gender-equitable societal norms; less acceptability of intimate partner violence; aspirations; self-efficacy

mutual accountability; soft skills; collective action and mobilization; "power within"). In some cases, whether a mechanism leverages groups for intervention delivery or stems from interactions among group members is ambiguous. For instance, groups may achieve "power within" through intentional programming like gender dialogues aimed at changing group members' attitudes. Interactions among women participating in groups may also incidentally improve "power within." Similarly, soft skills may be the direct result of skills trainings or may be the indirect result of group interactions, which enhance members' communicative ability, their deliberative efficacy, or their ability to cooperate. The analysis highlights these distinctions on a case-by-case basis.

Review of the Evidence on Impacts of Women's Groups and Associated Mechanisms

In this section, we review the evidence on each group type, focusing on understanding the causal pathways generated by livelihood and financial groups, health groups, and adolescent groups. We structure the analysis around whether the mechanisms and underlying explanations for the observed changes are related to the resources and content delivered in the groups (i.e., leveraging groups as a platform for intervention delivery), or attributed to peer interactions and social exchanges facilitated by the groups (i.e., leveraging interactions among group members). Table A1 in the Online Supplementary Appendix reports the studies included in the review and summarizes each intervention's details, group type, evaluation design, main findings, and mechanisms examined.

Livelihood and Financial Groups

Women experience limited economic opportunities relative to men in many contexts. For example, 59 percent of women have access to bank accounts in low- and middle-income countries compared to 67 percent of men (Demirguc-Kunt, Klapper, and Singer 2017). Women's ability to earn income can also be affected by social norms related to women's work, mobility, and other issues. Meanwhile, opportunities to control household resources can be constrained by women's relatively lower levels of bargaining power in the home (Laszlo et al. 2017).

Women's livelihoods and financial groups aim to improve women's livelihoods and financial opportunities by leveraging the group to provide access to financial resources that would have been challenging to offer to low-income individuals at the individual level due to cost and logistics. Women's livelihoods and financial groups may also offer additional benefits beyond financial outcomes. Women may learn leadership and other soft skills by administering a group or build connections in the community by forming relationships in the group. They may also increase their confidence and sense of their own ability to take on income-generating activities. Furthermore, training and other services added on to livelihoods and financial groups may lead to other impacts in women's lives.

Leveraging Livelihoods and Financial Groups as a Platform for Intervention Delivery

Access to Financial Services and Economic Outcomes. Livelihoods and financial groups have been an effective way to provide access to financial services, often leading to positive but not transformative business outcomes. As highlighted in previous reviews of microcredit interventions (Loiseau and Walsh 2015), access to microcredit groups led to positive but not transformative impacts on women's entrepreneurship, business creation, and the expansion of existing businesses. For example, access to

joint-liability microcredit in Mongolia increased the probability of women's entrepreneurship by nine percentage points compared to 39 percent for the comparison group (Attanasio et al. 2015). Likewise, access to joint-liability microcredit loans in India increased investments in small businesses and led to an increase in size for preexisting businesses, although access to the loans did not lead to increases in income on average (Banerjee et al. 2015).

Similarly, two studies on savings groups found that VSLAs and SHGs had moderate impacts on women's labor supply. A randomized trial of a VSLAs program for sexual violence survivors in the Democratic Republic of Congo found that, while both treatment and control groups saw a reduction in paid hours worked between baseline and follow up, women who participated in VSLAs experienced a smaller reduction. This effect, however, was significant only at the ten percent level (Bass et al. 2016). One study on SHGs in rural India found that women were five percent more likely to be involved in non-agricultural employment compared to the five percent of women in comparison villages (Desai and Joshi 2014).

However, there is mixed evidence that access to financial services in groups increases household economic well-being overall. In Burundi, access to VSLAs led to a 22 percent increase in average per capita consumption expenditures from a base of US$32 for the comparison group, and to an increase in the asset index score by 0.22, which is roughly equivalent to one extra head of cattle for each household (Annan et al. 2013). Another VSLA in the Democratic Republic of Congo, implemented in conflict-affected communities among sexual violence survivors, increased household per capita food consumption by 25 percent and the number of animals for breeding (Bass et al. 2016). Other studies found impacts on only some, but not all, measures of expenditures or assets (Baro et al. 2013; Beaman, Karlan, and Thuysbaert 2014; Ksoll et al. 2016). A study on access to VSLAs in Malawi found some evidence of increased total expenditure and size of the house (a measure of assets), but no effects on food consumption or gross asset count (Ksoll et al. 2016). Likewise, three studies found that microcredit groups had mixed impacts, with effects on either expenditure (Attanasio et al. 2014) or assets (Banerjee et al. 2015; Hoffmann et al. 2017), but not both. Finally, other studies on microcredit groups, SHGs, and savings groups found no positive impacts on measures of household economic well-being (Angelucci, Karlan, and Zinman 2015; Joshi, Palaniswamy, and Rao 2015; Karlan, Thuysbaert, and Gray 2017; Prillaman 2017).

Decision-Making. Livelihoods and financial groups did not consistently have impacts on women's decision-making power in the family. Five out of the fifteen studies we analyzed had impacts on decision-making. Some examples of programs with positive impacts include microcredit, VSLAs, and SHGs. One study found that access to group microcredit in Mexico increased the proportion of women who stated that they participated in decision-making by 0.8 percentage points. While this number

may seem small, most women already had high levels of decision-making ability at baseline, so there was very little room for improvement (Angelucci, Karlan, and Zinman 2015). An evaluation of women's VSLAs in Ghana, Malawi, and Uganda found small but positive impacts on women's decision-making measured through control over household food expenses, children's education expenses, and business expenses if the household operated a business (Karlan et al. 2017).

Three studies on women's SHGs in India also found positive effects. The first evaluation found that women with access to the groups were three to six percent more likely to have the final say in family planning, children's schooling, and family medical care (Desai and Joshi 2014). A second study of SHGs in India reported positive effects on women's decision-making related to consumption, daily tasks, and children's education, but not political decision-making in the household (Prillaman 2017). A third study evaluated SHGs combined with additional programming Women's SHGs plus gender transformative group learning sessions, which focused on empowering women economically and exposing them to topics related to gender norms and discrimination, increased group members' self-reported independent decision-making (Jejeebhoy et al. 2017).

Meanwhile, 10 of the studies that measured women's decision-making in the family did not find positive impacts. These included group microcredit in India (Banerjee et al. 2015) and Ethiopia (Tarozzi, Desai, and Johnson 2015); SHGs in India (Joshi, Palaniswamy, and Rao 2015); the Saving for Change savings group program in Mali (Baro et al. 2013; Beaman, Karlan, and Thuysbaert 2014); a study on the impact of switching from microcredit to SHG models in India (Hoffmann et al. 2017); and combined models such as SHGs plus anti-violence against women modules (Holden et al. 2016) group savings and microfinance plus family coaching (Ismayilova et al. 2018).

Among programs that did and did not affect women's decision-making, there was considerable overlap between the different programmatic models, locations, metrics used and initial levels of women's decision-making power. Researchers did not consistently discuss what prevented livelihoods and financial groups from impacting women's decision-making power. When they did so, the explanations they provided were not consistent across studies. In India, the lack of effect of microcredit dispensed through SHGs was attributed to the relatively short time horizon of the program evaluation (Hoffmann et al. 2017). However, another microcredit program in India found no effects on women's decision-making power three years after the program inception (Banerjee et al. 2015). One study on savings groups in Mali found that the quantitative and qualitative evaluations produced discordant results. While there were no statistically significant results on women's decision-making power in the quantitative analysis, the qualitative research pointed to some effects (Baro et al. 2013). However, in another study of a program against IPV delivered through SHGs in India, both the quantitative and the qualitative evaluations concluded that there was a lack of an

effect on women's decision-making power and control over income: in this case, the authors suggested that this may have been due to male backlash (Holden et al. 2016). The role of cultural factors in preventing increases in women's decision-making power also emerged as a potential explanation in Burkina Faso. Here, women participating in group savings and microfinance integrated with family coaching may have wanted to maintain the perception of men's role as main providers (Ismayilova et al. 2018).

Taken together, this calls for further research to understand why some programs enhanced women's decision-making and others did not. Measurement challenges may have contributed to the lack of a clear takeaway when it comes to decision-making. One study noted that the Demographic and Health Survey (DHS) decision-making modules researchers used were likely not fully capturing complex intra-household dynamics (Ismayilova et al. 2018). Researchers who specialize in women's economic empowerment frequently cite measurement challenges related to household decision-making, which raises the question of whether inconsistent impacts on decision-making indicators might be partially attributed to metrics construction (Martinez-Restrepo and Ramos-Jaimes 2017; Diaz-Martin, Glennerster, and Walsh 2018). Measuring women's decision-making power is part of the broader challenge of quantitatively capturing multifaceted concepts such as women's agency and empowerment. Reassuringly, researchers can rely on recent methodological advances in future evaluations (Alkire et al. 2013; Malapit et al. 2019; Ewerling et al. 2020; Jayachandran, Biradavolu, and Cooper 2021; Maiorano et al. 2021).

Complementary Interventions and Non-Economic Outcomes. Besides increasing access to financial resources, livelihoods and financial groups can be used to deliver complementary interventions such as training, leveraging groups' economies of scale. Trainings offered through livelihoods and financial groups have covered a range of topics, like health education (De La Cruz et al. 2009; Hamad, Fernald, and Karlan 2011; Spielberg et al. 2013b; Flax et al. 2014; Karlan, Thuysbaert, and Gray 2017), family coaching sessions (Annan et al. 2013; Ismayilova et al. 2018), and gender transformative learning sessions (Kim et al. 2007, 2009; Pronyk et al. 2006, 2008; Gupta et al. 2013; Jejeebhoy et al. 2017). Intentional program design that went beyond sole access to financial services was important for achieving moderate impacts in non-economic domains. Among the numerous non-economic impacts researchers measured, we here discuss in detail two widely-analyzed ones: "power within" and IPV.

Only livelihoods and financial groups with trainings and other add-on programming in addition to financial services measured "power within." Often, the complementary programming had the explicit goal of supporting gender equality. The ability to generate changes in "power within" through complementary programming appears to be connected to the dosage, i.e., the number of content-related

sessions implemented. Adding eight gender dialogue sessions to VSLAs in Côte d'Ivoire reduced the acceptance of wife-beating from 4 percent to 2.9 percent, particularly among couples with high attendance (Gupta et al. 2013). However, this finding should be interpreted with caution since high-attendance couples might have characteristics that differentiate them from the other participants, and these could potentially explain the positive effects on attitudes. An evaluation of SHGs plus a series of 24 two-hour gender-transformative group learning sessions in India found that participants in the program were more likely to disagree with the notion that a husband has the right to exhibit controlling behavior over a wife or to reject the idea that women should be subservient to men (Jejeebhoy et al. 2017). A study of the Gram Varta program in India, which contained 20 participatory health education sessions implemented in SHGs, had impacts on women's self-confidence in refusing sexual intercourse and demanding a condom (Subramanyam et al. 2017).

Meanwhile, three programs that did not have impacts on "power within" through intentional programming tended to implement fewer sessions. One program combined SHGs with a series of six sessions with content related to reducing violence against women in India but did not have impacts on attitudes about gender norms (Holden et al. 2016). Another program in Burkina Faso, which consisted of group savings and microfinance plus family coaching delivered monthly over a period of five months, also did not find changes in beliefs about gender equality (Ismayilova et al. 2018). The Intervention with Microfinance for AIDS and Gender Equity (IMAGE) program, which combined microfinance with 10 HIV and gender equity trainings and additional community mobilization activities in South Africa, did not change the percentage of women who disagreed with a series of six statements affirming traditional gender roles (Pronyk et al. 2006; Kim et al. 2007).

Reducing violence against women only occurred when groups served as a platform for complementary interventions expressly aimed at reducing violence. The impacts were fairly large when achieved, but not all programs had impacts. The IMAGE program in South Africa introduced HIV and gender equity trainings along with community mobilization sessions into microcredit groups (Kim et al. 2007, 2009; Pronyk et al. 2006, 2008). Two years after the completion of IMAGE, access to the program reduced IPV by more than half. Access to gender dialogue sessions on household and relationship dynamics within VLSAs in Côte d'Ivoire reduced economic abuse among women: the program reduced the odds of experiencing physical abuse by more than half among women who attended at least 75 percent of sessions relative to VSLA members who did not have access to the program (Gupta et al. 2013). Married women in SHGs that implemented a gender-transformative group learning program in India, along with complementary programming engaging husbands, experienced a 27 percent reduction in physical violence (Jejeebhoy et al. 2017). Nonetheless, women in the treatment group also experienced an 18 percent increase in emotional violence, from 76 to 90 percent, and engaging husbands did not lead to any additional impacts.

Likewise, another study in India that focused on mobilizing SHGs to reduce violence against women, along with complementary programming aimed at engaging men, did not achieve any impacts (Holden et al. 2016).

Overall, the evidence suggests that complementary programs only reduced IPV when they simultaneously improved non-economic outcomes like women's decision-making power (Kim et al. 2007, 2009; Jejeebhoy et al. 2017), social networks (Pronyk et al. 2006; Kim et al. 2007, 2009; Jejeebhoy et al. 2017), and/or "power within" (Pronyk et al. 2006; Kim et al. 2007, 2009; Gupta et al. 2013; Jejeebhoy et al. 2017). When complementary interventions failed to achieve changes in these non-economic areas, reductions in IPV were milder. Family coaching sessions integrated into livelihoods groups in Burundi increased women's financial autonomy but did not change decision-making power or "power within" at the 12-month follow-up survey. This led to a reduction in emotional forms of violence, but not in more severe forms like physical violence (Ismayilova et al. 2018). Similarly, a program in India designed to mobilize women's SHGs against violence against women did not change "power within," household decision-making, or women's mobility, and did not lead to a reduction in violence against women. Researchers posited that a lack of program fidelity or measurement error could explain the lack of results, in addition to the program alone being insufficient to change gender norms (Holden et al. 2016).

Leveraging Interactions among Group Members through Livelihoods and Financial Groups

There is strong evidence suggesting that livelihoods and financial groups encouraged the formation of social networks and/or leveraged existing social networks to support economic and non-economic outcomes. Studies that measured social networks found that they played a role in generating positive impacts for women, including but not limited to consumption and business creation (Attanasio et al. 2015), risk-sharing (Feigenberg, Field, and Pande 2013; Feigenberg et al. 2014), and political engagement (Prillaman 2017). When social networks led to positive economic outcomes, researchers highlighted that social networks within groups helped enforce mutual accountability among group participants (Feigenberg, Field, and Pande 2013; Dupas and Robinson 2013; Feigenberg et al. 2014 Giné and Karlan 2014; Attanasio et al. 2015). Other studies that measured social networks treated the networks as an outcome in their own right rather than a mechanism leading to additional impacts. Among these, two found evidence of increased social networks (Jejeebhoy et al. 2017; Karlan, Thuysbaert, and Gray 2017), two provided only qualitative evidence not substantiated by quantitative findings (Kim et al. 2009; Bass et al. 2016), and two evaluating the same savings program did not find that it had an effect on social networks (Baro et al. 2013; Beaman, Karlan, and Thuysbaert 2014).

One study directly tested the impact of group models by evaluating access to group versus individual microcredit programs in Mongolia. The study found that access to group loans increased the likelihood of a woman owning a business and had a moderate effect on food consumption, while access to individual loans had no impact on either of these outcomes. The positive economic outcomes were attributed to group dynamics that fostered mutual accountability, though social networks were not directly measured (Attanasio et al. 2015). Two studies of a group microcredit program in India found that increasing the frequency of the groups' meetings from monthly to weekly increased women's social capital over the short and long term (Feigenberg, Field, and Pande 2013; Feigenberg et al. 2014). More than a year after the end of the intervention, clients who had weekly meetings saw each other outside of group meetings 37 percent more often compared to clients who had monthly meetings—an increase from 5.5 to 7.5 interactions over the previous 30 days. More frequent meetings also led women to be more willing to engage in risk sharing with other group members (Feigenberg, Field, and Pande 2013). This evidence suggests that finding ways to strengthen social relationships within groups may play a role in helping group members achieve positive economic results, and in some cases, meeting frequency may contribute (Feigenberg, Field, and Pande 2013; Feigenberg et al. 2014).

Another study of microcredit in the Philippines found no significant difference in repayment rates between individual- and group-liability loan structures (Giné and Karlan 2014). In centers with individual credit, loan repayments were still made in groups, suggesting that the peer pressure of repaying within groups may have been sufficient to sustain high repayments even without contractual group obligations. Across individual- and group-liability offerings, individuals with strong social networks had higher repayment rates, also highlighting the importance of social relationships. Nonetheless, it was not possible to disentangle whether social relationships activated peer pressure to repay, since researchers could not rule out whether individuals with stronger social networks were also more trustworthy and thus more likely to repay (Giné and Karlan 2014).

Savings groups and VSLAs are also centered on the operating assumption that mutual accountability can be achieved through frequent meetings and peer enforcement. One study tested different informal savings methods to increase health investments ("piggybank"-style individual savings boxes that were either difficult or easy to access, ROSCAs, or health funds within ROSCAs). Researchers found that providing social pressure to make deposits in the ROSCA-setting increased health investments (Dupas and Robinson 2013). Researchers described mutual accountability as an inherent feature of VSLAs in Malawi (Ksoll et al. 2016) and savings groups in Mali (Baro et al. 2013; Beaman, Karlan, and Thuysbaert 2014). One study found that savings groups can beneficially affect economic outcomes (savings) by generating change in time preferences (Beaman, Karlan, and Thuysbaert 2014), a potential alternative channel for groups to lead to better self-discipline.

There is limited but consistent evidence that social networks formed in women's SHGs increased women's community and political participation in India, but evidence from other countries did not support this finding. Through a geographic regression discontinuity design, one study found that women who had access to networks of other women via SHGs were more likely to be politically active (Prillaman 2017). The researcher found that this was a result of women leveraging the economic networks of SHGs to enhance their political coordination. The resulting gender-based coordination and mobilization, along with enhanced political knowledge, civic skills, and confidence, in turn, translated into higher political action of women. Another study found that women with access to SHGs were more likely to know where to express public grievances, had a higher willingness to act on public grievances related to drinking water, and reported greater satisfaction with the state of public services. Researchers implemented a public goods game and found that women in communities with SHGs exhibited greater cooperative behavior (Desai and Joshi 2014).

However, it is unclear to what extent these results would generalize to other contexts. Access to financial groups did not lead to increased community mobilization in four other countries (Beaman, Karlan, and Thuysbaert 2014; Karlan et al. 2017). A study of the Savings for Change savings group program in Mali found no impacts on women's engagement in the community or voting behavior (Beaman, Karlan, and Thuysbaert 2014). Likewise, a study of VSLAs in Ghana, Malawi, and Uganda did not find impacts on community participation (Karlan et al. 2017). Yet, as outlined above, women in Benin assigned to receive access to microcredit and health education in women-only groups had higher social capital than women in mixed-gender groups (a metric that included some components of community mobilization, such as participation in local groups, village meetings, and influence in the village). Without further information regarding which part of the index drove the measured increases, it is possible that women with access to the women-only groups also exhibited greater political participation and influence in the village (Karlan, Thuysbaert, and Gray 2017).

Several studies evaluated social networks as outcomes rather than mechanisms for achieving other outcomes. Researchers in Benin evaluated the impact of offering microfinance plus health education in either mixed gender or women-only groups and found that women in the mixed-gender groups had lower social capital after the intervention, measured through membership in local groups and support networks along with participation in village meetings and influence in the village (Karlan, Thuysbaert, and Gray 2017). However, there were no differences according to an index measuring the number of people with whom women had financial relationships. Participation in SHGs plus gender-transformative group learning sessions in India increased women's perceived social support, including friendships and having someone to turn to in times of trouble. The program also improved "power within," decision-making authority, financial literacy, and reduced physical violence (Jejeebhoy et al. 2017).

In the Democratic Republic of Congo, a VSLA program for sexual violence survivors did not increase women's social ties or women's participation in groups (Bass et al. 2016). Similarly, a group-based microfinance program in South Africa, when not combined with gender training, did not increase women's ties in the community, measured through their social networks, their sense of community support, and their perception of solidarity during a crisis (Kim et al. 2009). These two studies that did not find impacts, however, identified qualitative evidence that social networks were strengthened in ways that were not measured or substantiated quantitatively (Kim et al. 2009; Bass et al. 2016).

Finally, two evaluations of the Savings for Change savings group program in Mali found that women did not report improved social capital as a result of access to the groups (Baro et al. 2013; Beaman, Karlan, and Thuysbaert 2014). By and large, while many papers discuss social networks as an outcome or critical mechanism of economic and livelihoods groups, more research is needed to understand how to trigger social network effects for positive results.

Health Groups

Reducing maternal and child mortality and morbidity is a policy priority in most low- and middle-income countries. Most maternal and neonatal deaths occur in poorer communities, often as a consequence of complications that would be preventable with appropriate health practices within the home and basic health care usage (World Health Organization 2018). According to the World Health Organization (WHO), lack of information on how to access health facilities and lack of knowledge of danger signs during pregnancy are factors that prevent women from seeking care around childbirth in low-income countries.

Women's health groups aim to address this public health priority by conveying health-related information. In settings with weak local health care systems, health groups may also create fruitful synergies between the demand side (patients) and supply side (providers) of health care, through community-based monitoring of health providers. In doing so, health groups may lead to additional benefits outside their core function, for example, by stimulating community mobilization and collective action at the local level.

Leveraging Health Groups as a Platform for Intervention Delivery

Health groups were an effective platform to convey health-related information. The majority of health group interventions analyzed in this review focused on providing information on maternal and newborn health. Through participatory learning facilitated by local women or trained local health workers, group gatherings delivered information related to healthy behaviors around birth and encouraged access

to health care for antenatal visits and delivery. Health information was also disseminated by leveraging existing livelihood groups, whose original purpose was not related to health, or delivered to adolescents through in-school peer-support groups or health promotion curricula.

When tested, participants' health knowledge generally increased as a result of access to health information through groups. Studies find increased knowledge on correct key infant feeding practices (Flax et al. 2014), on danger signs of diarrhea and dietary modifications for children with diarrhea (Hamad, Fernald, and Karlan 2011), on malaria (De La Cruz et al. 2009), on physical health issues (Leventhal et al. 2016), and on HIV (Spielberg et al. 2013a). However, one study found that participatory learning through SHGs had mixed effects on knowledge related to nutrition, diseases, domestic hygiene, sanitation, sexuality, and contraception (Subramanyam et al. 2017). The program increased women's contraception use but appeared not to improve adolescent girls' knowledge about sexuality and contraception. Surprisingly, the program seemed to adversely affect knowledge about domestic hygiene practices.

Though encouraging health care usage was often one of the purposes of women's health groups, there is mixed evidence on the effectiveness of groups in increasing access to formal health care. In India, a program combining mothers' groups with home visits had an overall positive impact on accessing health care for antenatal care and delivery (Acharya et al. 2015). In Pakistan, antenatal care promotion and maternal health education through groups increased women's contact with lady health workers during pregnancy by 18 percentage points (relative to a comparison group average of 26 percent) and institutional delivery by 10 percentage points (relative to a comparison group average of 44 percent), but not antenatal checkups in a health facility (Bhutta et al. 2011). In Nepal, women's groups promoting maternal and child health increased the likelihood of receiving antenatal care, visiting a health facility in event of illness, and delivering in a facility, although this effect did not translate into increased agency for health-seeking in the long run (Manandhar et al. 2004; Gram, Morrison, et al. 2018). In Nepal, women's groups had large effects on antenatal care attendance but did not increase institutional delivery (Sharma et al. 2016). Women's groups were successful in increasing antenatal care attendance in rural Nepal for women who, at baseline, did not adhere to best health practices (Wade et al. 2006).

However, in several other studies focusing on health groups, increases in health care utilization were not achieved. Most studies evaluated intention-to-treat effects using aggregate data at the administrative-unit level. In some cases, researchers attributed the lack of a positive effect to low group participation. This occurred due to low population coverage (i.e., a small number of groups per community), and/or contextual factors preventing women from attending group meetings, like social norms or climatic conditions. An intervention in Bangladesh, where only 9 percent of women of reproductive age were group members at endline, did not affect health care usage around birth (Azad et al. 2010). A similar study in Malawi, where only

10 percent of newly pregnant women attended the groups, did not find effects on institutional delivery (Colbourn et al. 2013). Women's groups did not affect antenatal care, institutional deliveries, or postnatal checks in urban India, where population estimates revealed that groups reached only eight percent of reproductive-age women (More et al. 2012). Yet, a lack of significant effects on health care usage occurred also when interventions achieved higher participation. This was the case in two participatory women's group programs or participatory learning through SHGs in India (Tripathy et al. 2010; Houweling et al. 2013; Tripathy et al. 2016; Subramanyam et al. 2017), in women's groups in Bangladesh (Fottrell et al. 2013), and in a malaria education intervention in Ghana delivered through microfinance groups (De La Cruz et al. 2009).

There is more promising evidence of information delivered through health groups leading to better health practices and behaviors within the home, as opposed to increased access to health care. In groups where the focus was maternal and child health, researchers measured changes in health behaviors in home-care practices like hygiene during home delivery and best practices with the newborn (thermal care and breastfeeding). A women's group intervention in India increased the likelihood of exclusive breastfeeding for the first six months after delivery, delaying the newborn's first bath, and being attended by a delivery assistant who washed hands, used a clean new blade to cut the newborn umbilical cord, and applied nothing on the umbilical cord stump (Acharya et al. 2015). Positive effects on similar delivery and newborn practices were achieved in other women's group interventions in India (Kumar et al. 2008; Roy et al. 2013; Tripathy et al. 2016; Nair et al. 2017), Bangladesh (Baqui et al. 2008; Fottrell et al. 2013), Pakistan (Bhutta et al. 2011), and Nepal (Wade et al. 2006). Other interventions achieved significant effects in some, but not all, home-care practices that researchers measured (Manandhar et al. 2004; Tripathy et al. 2010; Houweling et al. 2013).

In turn, teaching better health practices within the home generated positive effects on health, including saving women's and children's lives. The majority of health groups had large impacts on at least one primary health outcome. In line with the content of health groups, the most investigated outcomes were neonatal mortality and, to a lesser extent, maternal mortality and morbidity. Researchers found that women's groups were effective in reducing neonatal or infant mortality in many contexts, including India (Kumar et al. 2008; Tripathy et al. 2010, 2016; Roy et al. 2013), Nepal (Manandhar et al. 2004), Pakistan (Bhutta et al. 2011), Bangladesh (Fottrell et al. 2013), and Malawi (Colbourn et al. 2013). These effects were often large in magnitude: for example, women's groups decreased neonatal mortality by 38 percent in Bangladesh, compared to the neonatal mortality rate in comparison areas of 30 deaths per 1,000 live births (Fottrell et al. 2013). A systematic review and meta-analysis analyzing studies conducted in Bangladesh, India, Malawi, and Nepal found a 20 percent reduction in neonatal mortality (Prost et al. 2013).

Other studies found mixed results. A study on women's groups in India identified an effect on maternal morbidity (defined as complications during pregnancy, labor, delivery, and postpartum) but not on neonatal mortality (Acharya et al. 2015). A study in Bangladesh, which analyzed the impact of women's groups separately from the impact of home visits, found that only home visits were successful in reducing neonatal mortality (Baqui et al. 2008). In Guinea-Bissau, women's groups reduced maternal mortality but had no effect on under-5 mortality (Boone et al. 2016).

Taken together, these results suggest that women's groups may be an effective way to encourage easily-adoptable health behaviors within the home that, in turn, can lead to sizable impacts on health. High participation in group meetings was an important factor to achieve positive health effects.

When group-based interventions intended to reduce depression, researchers evaluated effects on mental health outcomes. Group interpersonal psychotherapy in rural Uganda decreased depression and dysfunction (Bolton et al. 2003), group counseling in Tanzania delivered in a psychosocial support group reduced depression (Kaaya et al. 2013), while one study in Bangladesh evaluating participatory women's groups did not find effects on mothers' postpartum psychological distress (Clarke et al. 2014).

Leveraging Interactions among Group Members through Health Groups

In settings with weak local health care systems, health groups may create constructive synergies between the demand side and supply of health care through community-based monitoring of health providers. Interventions delivered through health groups may leverage the group structure to stimulate community mobilization and collective action at the local level. Given their collective nature, these mechanisms are inherently related to groups and could not be harnessed through health interventions delivered at the individual level. Yet, we identified mixed evidence regarding the ability of health groups to increase collective action and community mobilization.

Two studies of health care system monitoring programs found that they were effective in increasing group members' community mobilization and engagement in health care delivery (Bjorkman and Svensson 2009; Gullo et al. 2018). In Malawi, a health monitoring intervention found that women who actively participated in the program experienced improvements in an index measuring participation in various types of community groups (Gullo et al. 2018). The intervention facilitated the formation of interactive local groups where women from the community could discuss issues related to maternal and newborn health with health workers and government officials. The intervention was also associated with improvements in perceptions about the quality and equity of negotiated spaces. However, there was no effect on collective efficacy, which measured women's confidence in how well community members and health workers could come together to bring about change. Similarly, a study in Uganda found that a community health monitoring program enabled

community members to act collectively to hold health service providers accountable. The intervention consisted of a series of meetings where focus group discussions ensured that women and members from other marginalized groups had the opportunity to voice their concerns (Bjorkman and Svensson 2009).

In other cases, health groups were not successful in generating a base for collective action. A health promotion curriculum for adolescents in Tanzania, while positively affecting adolescent's self-efficacy and deliberative efficacy on HIV-related topics, did not positively impact collective efficacy at the neighborhood level (Carlson, Brennan, and Earls 2012). Another study anecdotally highlighted the difficulty of achieving collective action through health groups in India. While women were generally open to acquiring new information, they seemed less willing to engage in collective action (More et al. 2012).

Three studies suggest that community monitoring health groups can increase women's involvement in the community, though the effects were not sustained in the long term in one case. A health community monitoring intervention in Malawi increased women's participation in various types of community groups (Gullo et al. 2018). Another study of a participatory learning and action program in Nepal found that the presence of health groups increased women's participation in groups unrelated to the intervention (Gram, Morrison, et al. 2018). However, another study of a similar intervention in Nepal did not find similar effects in the long run: when resurveyed after more than 10 years, women residing in clusters originally assigned to treatment were not more likely to participate in groups (Gram, Skordis-Worrall, et al. 2018). These results should be interpreted with caution, as the authors mention low statistical power among the limitations of their study. In India, there was some suggestive evidence that participatory learning and action through SHGs increased women's involvement in the community, measured through the probability of being acquainted with health staff and other officials. However, these results were not statistically significant when including control variables, and there was no effect on other indicators of community and political engagement, such as voting or attendance to public meetings (Subramanyam et al. 2017).

Despite this evidence, researchers did not investigate to what extent social networks and moral support were crucial mechanisms that made health groups effective in achieving positive outcomes. One study in India highlighted that women's existing social networks helped extend the beneficial effects of health groups to the rest of the community. Women shared the health knowledge acquired in group meetings with non-participant women belonging to their social network. This, in turn, increased immunization in the whole community (Janssens 2011). However, it is unclear whether spillovers occurred due to the group nature of the intervention or whether information delivered individually (e.g., through home visits) would have generated similar benefits. Some researchers argued that, in a group counseling intervention in Tanzania, both social networks and moral support by members of the networks might have

been important pathways to achieve mental health impacts, but evidence on this was only anecdotal and not based on systematic or rigorous evidence (Kaaya et al. 2013). Future research efforts should quantitatively explore whether social networks and moral support operate as mechanisms within health groups.

Adolescent Groups

Targeting group programs towards adolescents is important given the unique set of challenges that adolescent girls face. Adolescent girls are at a juncture in their lives where they are at risk for early marriage and pregnancy, which can potentially increase dependence on men (Dupas 2011). Teen pregnancy and early marriage are also likely to hinder girls' human capital investment and future participation in the labor force (Bruce and Hallman 2008; Field and Ambrus 2008). Given all these factors, interventions targeted at girls during this crucial period in their lives may have greater returns than interventions later in their lives (Heckman and Mosso 2014).

Most adolescent group programs we analyze in this section aim to provide young girls access to a safe space where they can meet and interact with other girls in their age group. Apart from enabling access to peer networks and providing a safe-space, adolescent groups have served as a platform for delivering hard and soft skills training programs. The Empowerment and Livelihoods for Adolescents (ELA) program implemented by the NGO BRAC, for example, provides vocational and life skills trainings to young girls to increase their economic status and personal agency. This program has been evaluated in several contexts, including Uganda, South Sudan, Sierra Leone, and Tanzania. Other safe space programs for adolescents have included life skills and negotiation skills trainings to improve socio-economic outcomes for adolescent girls.

Leveraging Adolescent Groups as a Platform for Intervention Delivery

Adolescent group programs, which often served as a platform to deliver hard and soft skills trainings to girls, consistently led to economic gains or increased school enrollment. Improvements in girls' soft and life skills appeared to be an important part of this process. Studies conducted in Uganda (Bandiera et al. 2020), Bangladesh (Buchmann et al. 2018), and South Sudan (Buehren, Chakravarty, et al. 2017), found that safe-space programs for adolescents, when bundled with skills training programs, were associated with better economic outcomes. However, since soft skills trainings were often combined with hard skills trainings, it is difficult to disentangle the precise cause of the increase in income-generating activities.

In Uganda, the ELA program led to a large increase in the likelihood of engaging in income-generating activities (Bandiera et al. 2020). In South Sudan, the impacts of the ELA program were limited to geographic areas that were unaffected by conflict (Buehren, Chakravarty, et al. 2017). This finding suggests that more specific

programming might be necessary in conflict-affected regions to bring about desired outcomes on income-generating activities (Buehren, Chakravarty, et al. 2017). In Bangladesh, an empowerment training program increased the likelihood of adolescent girls being engaged in income-generating work by 21 percentage points compared to a mean of 26 percent in the control group (Buchmann et al. 2018). This empowerment program, called *Kishoree Kontha*, occurred in a safe space setting and provided educational support and social competency training to adolescent girls. On the other hand, an evaluation of the ELA program in Tanzania did not find that the safe space program combined with skills training affected economic outcomes. Qualitative comparisons between this study and the others suggested that the lack of impacts could be attributed to implementation challenges (Buehren, Goldstein, et al. 2017). Despite this, adding a microfinance component to the adolescent safe space programs increased the likelihood of girls having savings at informal institutions (ROSCAs) in this same setting.

Results from two studies show that training programs delivered in safe spaces can lead to increases in education outcomes. In Zambia, negotiation training in after-school safe spaces for adolescents led to a 10 percent increase in school enrollment in grades after the transition to secondary school (10th and 11th grade) (Ashraf et al. 2020). In Bangladesh, *Kishoree Kontha* increased the likelihood of being in school for girls aged 15, but not for older girls (Buchmann et al. 2018).

Soft and life skills training programs delivered in adolescent groups led to increases in "power within" among adolescent girls in most programs that measured it. However, future research should determine whether these impacts can persist in the long term and whether they can occur in areas disrupted by conflict or disease. The evaluations that measured "power within" most consistently treated it as a direct outcome of the skills training programs. An evaluation of the *Kishoree Kontha* program found that it increased adolescent girls' developmental assets such as truth-telling, seeking advice from parents, and good time use (Scales et al. 2013). Another evaluation of the *Kishoree Kontha* program found a marginally significant long-term impact on an empowerment index measuring gender attitudes, mobility, contraception, and decision-making power for girls who were 10 to 17 years old at program launch (Buchmann et al. 2018). For the subsample of older girls who were 15 to 17 years old, the long-term impact on the empowerment index, while large, was not statistically significant. The Girl Empower program in Liberia, a safe space program that provided life skills training to girls aged 13–14, improved girls' attitudes about gender equity and IPV (Özler et al. 2020).

In India, a program that delivered a psychosocial training intervention based on a resilience curriculum improved adolescent girls' emotional resilience, self-efficacy, and social-emotional assets. The intervention also reduced anxiety and improved psychosocial wellbeing. However, it did not have a detectable effect on depression. Researchers noted that this study did not include follow-up surveys at different time

points and therefore, it is not certain if the effects of the intervention were sustained in the long term. Additional qualitative work indicated that improvements in psychosocial assets could potentially enable girls to advocate for themselves to stop early marriage, stay in school, and achieve their goals (Leventhal et al. 2015). In a refugee camp in Ethiopia, a safe space and life skills program to combat IPV improved girls' attitudes regarding rites of passage, such as beliefs about the highest grade girls should complete in school, the acceptability of girls to work outside the home after marriage, and the appropriate age for marriage and having children. Girls who received the program also had greater odds of believing a girl should get married and have her first child after age 18 (Stark et al. 2018).

Studies of the ELA programs found impacts on "power within" in some contexts. In Uganda, the ELA program had long-lasting effects on girls' views of the ideal age of marriage and the most suitable age to start childbearing for women. However, it is not entirely clear if impacts on all aspects of "power within" can be sustained in the long-term: the effects of ELA on most other aspirations-related outcomes, including questions about gender roles and duties, were most prominent two years after the intervention but seemed to fade out after four years (Bandiera et al. 2020). In Tanzania, girls who received the ELA program along with a microfinance component experienced a marginally significant increase in perceptions about gender roles (Buehren, Goldstein, et al. 2017). The ELA program in Sierra Leone led to sizable improvements in attitudes towards gender norms, measured through an empowerment index capturing girls' opinions on the division of roles between men and women within the household. However, a positive effect occurred only in areas least affected by the Ebola virus and was marginally significant only for younger girls, i.e., those who were between 12 and 17 years old at baseline (Bandiera et al. 2019). In conflict-affected South Sudan, researchers evaluating the ELA program failed to find impacts on "power within," and even found negative effects on perceptions about gender roles (Buehren, Chakravarty, et al. 2017).

Despite a lack of impacts on "power within," two safe-space programs combined with skills training helped mitigate, to some extent, the adverse effects of an external shock on school enrollment and other outcomes. In Sierra Leone, the ELA program coincided with the 2014 Ebola outbreak. The Ebola-related disruption caused an overall increase in adolescent out-of-wedlock pregnancy, which may have occurred because of the increased time girls spent around men. This impact on out-of-wedlock pregnancy was completely reversed in highly-disrupted areas that were assigned to the ELA program (Bandiera et al. 2019). Similarly, girls in communities highly affected by Ebola who did not have access to ELA clubs experienced a 16 percentage point drop in enrollment from a 51.9 percent average at baseline. In the treatment group, however, this drop was halved to an 8.1 percentage point fall (Bandiera et al. 2019). Access to the ELA program allowed girls to combine school and work and reduced the likelihood for girls to focus exclusively on income generation in areas

severely affected by Ebola. However, these effects were not observed in areas of Sierra Leone less affected by Ebola, and the reason for this somewhat puzzling pattern is unclear.

In South Sudan, a safe-space program offering skills training helped mitigate the negative effects of conflict on school enrollment. Conflict-affected areas that did not receive the program experienced a 6.8 percentage point decrease in girls' school enrollment, while in conflict-affected treatment areas, this negative effect seemed to be partially mitigated (Buehren, Chakravarty, et al. 2017).

Adolescent group programs had limited impacts on unwanted sex and IPV. The ELA program in Uganda decreased the share of girls who reported unwanted sex, but the same program did not achieve similar impacts in Sierra Leone, Tanzania, or South Sudan (Buehren, Goldstein, et al. 2017; Buehren, Chakravarty, et al. 2017; Bandiera et al. 2019; Bandiera et al. 2020). One study in Bangladesh measuring the impact of a safe-space program combined with a training program for communication and negotiation skills found that it decreased the risk of physical IPV among young women between the ages 15 and 19 who received the curriculum in mixed gender groups (Naved et al. 2018). The Girl Empower safe-space program in Liberia did not reduce sexual violence, despite the positive impacts on girls' "power within" outlined above (Özler et al. 2020).

Adolescent groups had mixed impacts on life cycle choices and changes, such as marriage, contraceptive use, and pregnancy. Qualitative analysis of the *Kishoree Kontha* program revealed that the impact of empowerment programs for girls may be confined to domains in which they are able to exert agency. Providing adolescent girls tools for negotiation through training programs seemed to have been an effective strategy to help them overcome barriers related to income-generating activities, but not other areas like marriage or pregnancy. *Kishoree Kontha* did not lead to any changes in rates of early marriage, although this was one of the goals of the program (Buchmann et al. 2018).

Other studies, however, did find effects on reported rates of early marriage. In Ethiopia, a life skills and safe space program for refugee girls between ages 13 and 19 was associated with a decrease in self-reported child marriage among girls who were married at baseline. However, the reason for this is unclear; it could be due to actual changes in marital status or under-reporting caused by social desirability bias (Stark et al. 2018). In Uganda, while marriage rates for adolescent girls in the comparison group rose between baseline and follow-up, this effect was almost entirely prevented among girls who received the ELA program, and there was a reduction in adolescent pregnancy (Bandiera et al. 2020). Likewise, the ELA program in Sierra Leone reversed the increase in pregnancy rates caused by the Ebola outbreak and increased older girls' and women's use of non-condom contraceptives (Bandiera et al. 2019).

Leveraging Interactions among Group Members through Adolescent Groups

Group meetings alone, even without additional programming, may have offered minor benefits to girls. However, more research is necessary to disentangle the role of programmatic components from that of the safe space alone. Only one study in Zambia separately identified the effects of the safe space program from the effects of the negotiation training embedded within the safe space program. Although the effects of the safe space on school enrollment were never statistically different from zero, researchers could not statistically reject that the safe space and negotiation treatments had the same positive effect on average (Ashraf et al. 2020). Another study on the ELA program in Uganda found that while the life skills training was an important mediator of economic empowerment, a portion of the effect still remained unexplained. Researchers attributed part of the effect to the safe space itself, although they did not test this directly (Bandiera et al. 2020).

Evidence from five studies suggests that safe-space programs can strengthen adolescent girls' social networks. However, it is unclear to what extent these findings hold in areas affected by conflict or an epidemic. The ELA program in South Sudan increased girls' likelihood to have a place in their community, other than home or school, where they could meet other girls, but only in communities unaffected by the conflict (Buehren, Goldstein, et al. 2017). The ELA clubs in Sierra Leone shifted girls' leisure time away from spending time alone, with men, other friends, or volunteering. Additional findings revealed that the program helped protect girls' social ties that were disrupted by the Ebola outbreak. In highly-disrupted villages, the program curbed the loss of business and credit ties, friendship ties for younger girls, and ties for discussing intimate topics for older girls (Bandiera et al. 2019). In Tanzania, the ELA program increased the likelihood of girls talking to their friends about business only when a microfinance component was added to the safe space program (Buehren, Goldstein, et al. 2017). Finally, a study in a refugee camp in Ethiopia found that a safe space and life skills program strengthened social networks. Girls in the intervention were more likely to report having friends their own age and having a trusted nonfamily adult in their life. However, social network strengthening did not lead to the desired decrease in IPV (Stark et al. 2018).

Concluding Remarks: Overarching Lessons and Open Questions

In this review, we found that women's groups had positive impacts on women's economic and broader lives by operating as a platform for providing access to information and services, such as financial services and skills trainings, for several women at one time and place. This was the most consistent finding regarding mechanisms operating within groups. Leveraging groups as a platform for intervention delivery may come with substantial economies of scale when the groups already exist.

For example, a study on the Jeevika program in India documented that scaling up SHGs from 8 thousand to 5.7 million beneficiaries reduced the per-capita cost of the program from US$37 to US$13 (Siwach, Paul, and de Hoop 2020). However, if an intervention requires forming new groups, then high start-up costs could compromise cost-effectiveness. In addition, taking into consideration the costs associated with women's time and effort to coordinate a mutually feasible time to meet will be critical to have a more comprehensive understanding of the cost-effectiveness of this model.

More comprehensive data on costs and alternative research designs can help clarify the extent to which groups may be preferable to individually-focused approaches to intervention delivery. The need to shed light on whether or not groups are more cost-effective than individual-based models has also been advocated in a recent commentary on women's groups in India (Raghunathan and Desai 2021). The studies we analyzed in this review did not explicitly investigate how the costs and benefits of group models compare to those of similar interventions delivered outside groups. An exception is a recent study in India which found that delivering nutritional information through groups had similar impacts to delivering information through home visits, but the group model entailed considerably lower costs and was thus more cost-effective (Grantham-McGregor et al. 2020). Understanding whether this finding applies to other contexts, services delivered, and group types is a promising avenue for future research.

Intentional program design was important for having impacts outside the core function of the group. For example, effects on IPV occurred when livelihoods groups served as a platform for complementary interventions expressly aimed at changing this outcome. Researchers assessed changes in "power within" only in evaluations of explicit empowerment programming whose content aimed at changing attitudes or aspirations, but the evidence was mixed. The success of these programs in changing "power within" appeared to be sensitive to dosage and context: programs were ineffective when they implemented small numbers of sessions or in disease or conflict settings. Complementary programming within women's groups may affect the cost-effectiveness and delivery of programs at scale. Therefore, viability for scaling these models should be investigated further. Besides cost-effectiveness, open questions remain on the optimal way of bundling multiple interventions within women's groups or aligning groups with complementary community programming.

Our review finds that the key benefit of using groups—or at least the one backed by quantitative evidence—is economies of scale, not social connections and team spirit, which is another hypothesized benefit. That said, studies discussed in this review show that, to some extent, women's groups can leverage interactions among members to bring about change. While not uniformly reported in the studies, evidence suggested that women's groups served to strengthen or leverage social networks to catalyze political participation (Prillaman 2017), increase risk-sharing (Feigenberg,

Field, and Pande 2013; Feigenberg et al. 2014), and reduce the amount of time that adolescents spent in risky settings (Bandiera et al. 2019). Despite this promising evidence, how to leverage social networks for specific impacts remains an open question.

In our analysis of the literature, there is suggestive evidence that groups build moral support, one of the pathways through which social networks may operate. Evidence outside of group-based interventions highlights that moral support might be an important mechanism to achieve positive outcomes. A business training program study identified improved business outcomes when women attended the training with a friend compared to attending the training without a friend, and the researchers determined that peer support was a primary mechanism for the improved outcomes (Field et al. 2016). Another study from Bangladesh found positive impacts from studying with friends (Hahn et al. 2017). In light of these findings, further research should consistently measure women's perceived moral support within groups, and test how it can bring about change in women's lives.

A small number of studies in this review found that social networks within livelihoods and financial groups helped enforce mutual accountability, which was linked to positive economic outcomes. Additional studies on peer effects, which are not focused on groups so are outside the scope of this review, suggest that mutual accountability can exist without a formal group structure. In India, people saved more when another member of their community knew about their savings progress (Breza and Chandrasekhar 2019). Another study in India found that borrowers were more likely to repay when their peers repaid even without joint liability loans: these peer effects arose from the regular interactions facilitated by the microfinance institution (Breza 2012). These findings suggest that the frequency of interactions and the presence of group members that already have strong community relationships can be important components in activating mutual accountability. Further research is needed to better generate specific recommendations about meeting frequency and group composition, along with how these dynamics might translate on digital platforms.

To conclude, group models can serve as an entry point to reach many people at once with resources, information, or training, and bring about positive changes in women's and girls' lives. Future research should further investigate whether, and how, women's groups can be greater than the sum of the parts by leveraging the interactions among members of a group to achieve broad development outcomes.

Notes

Lucía Díaz-Martin is Program Manager at the CRI Foundation (lucia@crifoundation.org)); Akshara Gopalan is Senior Policy Associate at the Abdul Latif Jameel Poverty Action Lab (J-PAL: agopalan@povertyactionlab.com); Eleonora Guarnieri is a Lecturer in Economics at the University of Exeter Business School (e.guarnieri@exeter.ac.uk); Seema Jayachandran is a Professor of

Economics at Northwestern University and Chair of J-PAL's Gender Sector (corresponding author, seema@northwestern.edu)

The authors thank Wei Chang, Thomas De Hoop, Sapna Desai, Diva Dhar, Mikaela Rabb, Claire Walsh, the editor Peter Lanjouw and three anonymous reviewers for valuable comments and suggestions. All remaining errors are our own.

This work was supported by the Bill & Melinda Gates Foundation [OPP1198806].

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